

WHAT IS CLAIMED IS:

1 1. A telecommunications system within a Code
2 Division Multiple Access 2000 (CDMA2000) network, said
3 CDMA2000 network having a base station serving a
4 sector, said base station further having a queue
5 therein for storing data packets associated with data
6 sessions involving one or more mobile terminals whose
7 respective data rate controls (DRC) are pointed towards
8 said sector, said queue having a size, said
9 telecommunications system comprising:
10 an overhead message handler adapted to receive
11 said queue size and compare said queue size with a
12 predefined threshold;
13 means for selecting one or more of said mobile
14 terminals when said queue size exceeds said predefined
15 threshold; and
16 means for transmitting a respective message to
17 said selected one or more mobile terminals, said
18 message instructing said selected one or more mobile
19 terminals to not point their said respective DRCs
20 towards said sector.

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1 2. The telecommunications system of Claim 1,
2 further comprising:

3 a base station controller connected with said base
4 station, said overhead message handler being within
5 said base station controller.

1 3. The telecommunications system of Claim 1,
2 wherein said message is a QuickConfig message.

1 4. The telecommunications system of Claim 3,
2 wherein each said QuickConfig message includes a DRC
3 Lock field, said DRC Lock field having a bit set to 0
4 indicating that said DRC of said respective selected
5 mobile terminal is not valid.

1 5. The telecommunications system of Claim 4,
2 wherein each said QuickConfig message includes a
3 Reserved field, said Reserved field having one or more
4 bits set to a MACIndex associated with said respective
5 selected mobile terminal.

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1 6. The telecommunications system of Claim 1,
2 wherein said means for selecting comprises mobile
3 terminal selection logic adapted to analyze one or more
4 factors to select said selected one or more mobile
5 terminals to discontinue using said sector for said
6 respective data sessions.

1 7. The telecommunications system of Claim 1,
2 wherein said selected one or more mobile terminals set
3 their DRC cover index to 0 in response to receipt of
4 said message.

1 8. The telecommunications system of Claim 1,
2 wherein said selected one or more mobile terminals
3 perform virtual handoffs to one or more adjacent
4 sectors of said base station by pointing their
5 respective DRCs towards the adjacent sectors.

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1 9. The telecommunications system of Claim 1,
2 wherein said base station is a high data rate (HDR)
3 base station having a data only carrier capable of
4 providing only data service to said one or more mobile
5 terminals.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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1 10. A telecommunications system for load sharing
2 within a Code Division Multiple Access 2000 (CDMA2000)
3 network, said telecommunications system comprising:
4 a base station serving a sector, said base station
5 further having a queue therein for storing data packets
6 associated with data sessions involving one or more
7 mobile terminals whose respective data rate controls
8 (DRCs) are pointed towards said sector, said queue
9 having a size; and
10 a base station controller storing a predefined
11 threshold for said sector therein, said base station
12 controller being adapted to receive said queue size
13 from said base station and compare said queue size with
14 a predefined threshold, said base station controller
15 being further adapted to select one or more of said
16 mobile terminals when said queue size exceeds said
17 predefined threshold and transmit a respective message
18 to said selected one or more mobile terminals
19 instructing said selected one or more mobile terminals
20 to not point their respective DRCs towards said sector.

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1 11. The telecommunications system of Claim 10,
2 wherein said message is a QuickConfig message.

1 12. The telecommunications system of Claim 11,
2 wherein each said QuickConfig message includes a DRC
3 Lock field, said DRC Lock field having a bit set to 0
4 indicating that said DRC of said respective selected
5 mobile terminal is not valid.

1 13. The telecommunications system of Claim 12,
2 wherein each said QuickConfig message includes a
3 Reserved field, said Reserved field having one or more
4 bits set to a MACIndex associated with said respective
5 selected mobile terminal.

1 14. The telecommunications system of Claim 10,
2 wherein said selected one or more mobile terminals set
3 their DRC cover index to 0 in response to receipt of
4 said message.

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1 15. The telecommunications system of Claim 10,
2 wherein said selected one or more mobile terminals
3 perform virtual handoffs to one or more adjacent
4 sectors of said base station by pointing their
5 respective DRCs towards the adjacent sectors.

1 16. The telecommunications system of Claim 10,
2 wherein said base station is a high data rate (HDR)
3 base station having a data only carrier capable of
4 providing only data service to said one or more mobile
5 terminals.

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1 17. A Base Station Controller within a Code
2 Division Multiple Access 2000 (CDMA2000) network, said
3 Base Station Controller comprising:
4 a predefined threshold for a sector associated
5 with said Base Station Controller, said sector having
6 one or more mobile terminals therein each pointing
7 their respective Data Rate Control (DRC) towards said
8 sector for a respective data session, said sector
9 having a queue associated therewith, said queue storing
10 data packets associated with said data sessions, said
11 queue having a size;
12 an overhead message handler adapted to receive
13 said queue size and compare said queue size with said
14 predefined threshold; and
15 selection logic adapted to select one or more of
16 said mobile terminals when said queue size exceeds said
17 predefined threshold and cause said Base Station
18 Controller to transmit a respective message to said
19 selected one or more mobile terminals, said message
20 instructing said selected one or more mobile terminals
21 to not point their respective DRCs towards said sector.

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22 18. The Base Station Controller of Claim 17,
23 wherein said message is a QuickConfig message.

1 19. The Base Station Controller of Claim 18,
2 wherein each said QuickConfig message includes a DRC
3 Lock field, said DRC Lock field having a bit set to 0
4 indicating that said DRC of said respective selected
5 mobile terminal is not valid.

1 20. The Base Station Controller of Claim 19,
2 wherein each said QuickConfig message includes a
3 Reserved field, said Reserved field having one or more
4 bits set to a MACIndex associated with said respective
5 selected mobile terminal.

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1 21. A method for load sharing within a Code
2 Division Multiple Access 2000 (CDMA2000) network, said
3 method comprising:

4 storing a predefined threshold for a sector of
5 said CDMA2000 network, said sector having a queue
6 associated therewith for storing data packets
7 associated with data sessions involving one or more
8 mobile terminals whose respective data rate controls
9 (DRCs) are pointed towards said sector, said queue
10 having a size;

11 comparing said queue size with said predefined
12 threshold; and

13 if said queue size exceeds said predefined
14 threshold, transmitting a respective message to
15 selected ones of said one or more of said mobile
16 terminals instructing said selected one or more mobile
17 terminals to not point their respective DRCs towards
18 said sector.

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1 22. The method of Claim 21, wherein each said
2 message is a QuickConfig message, said step of
3 transmitting further comprising:

4 setting a bit of a DRC Lock field of said
5 QuickConfig message to 0 indicating that said DRC of
6 said respective selected mobile terminal is not valid.

1 23. The method of Claim 22, wherein said step of
2 transmitting further comprises;

3 setting one or more bits of a Reserved field of
4 each said QuickConfig message to a MACIndex associated
5 with said respective selected mobile terminal.

1 24. The method of Claim 21, further comprising:

2 setting the DRC cover index of each of said
3 selected one or more mobile terminals to 0 in response
4 to receipt of said message.

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1 25. The method of Claim 21, further comprising:
2 performing virtual handoffs by said selected one
3 or more mobile terminals to one or more adjacent
4 sectors by pointing their respective DRCs towards said
5 one or more adjacent sectors.

1 26. The method of Claim 21, wherein said step of
2 transmitting further comprises:
3 analyzing one or more factors to select said
4 selected one or more mobile terminals to discontinue
5 using said sector for said respective data sessions.

PROPRIETARY INFORMATION